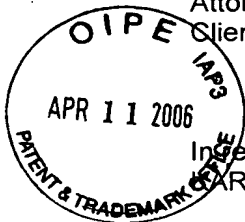


Attorney's Docket 060258-0280324  
Client Reference: T299053US/PYK



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor: PATENT APPLICATION of:  
SARI NIEMELA ET AL.

Confirmation Number: 4481

Application No.: 09/866,577

Group Art Unit: 2663

Filed: May 29, 2001

Examiner: Lee, Chi Ho A.

For: ALLOCATING ABIS INTERFACE TRANSMISSION CHANNELS IN PACKET  
CELLULAR RADIO NETWORK

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

AMENDMENT/RESPONSE TRANSMITTAL

Transmitted herewith is an amendment/response for this application.

EXTENSION OF TIME

The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply. Applicant petitions for a 1 month extension of time under 37 C.F.R. 1.136.

FEES

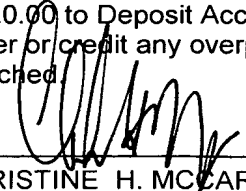
The fee for claims and extension of time (37 C.F.R. 1.16 and 1.17) has been calculated as shown below:

	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NO. PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE	ADDIT. FEE
TOTAL	16	- 20	= 0 x	\$ 50.00	= \$ 0.00
INDEP.	2	- 3	= 0 x	\$ 200.00	= \$ 0.00
FIRST PRESENTATION OF MULTIPLE DEP. CLAIM			+ \$	360.00	= \$ 0.00
TOTAL ADDITIONAL CLAIM FEE					\$ 0.00
EXTENSION OF TIME FEE					\$ 120.00
GRAND TOTAL					\$ 120.00

FEE PAYMENT

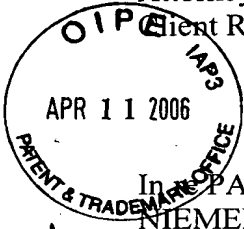
Authorization is hereby made to charge the amount of \$120.00 to Deposit Account No. 033975. Charge any additional fees required by this paper or credit any overpayment in the manner authorized above. A duplicate of this paper is attached.

Date: April 11, 2006  
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04/12/2006 SZEWDIE1 00000104 033975 09866577  
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Attorney Docket: 060258-0280324  
Client Reference: T299053US/PYK



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In PATENT APPLICATION of: KARI  
NIEMELA, ET AL.

Confirmation Number: 4481

Application No.: 09/866,577

Group Art Unit: 2663

Filed: May 29, 2001

Examiner: Lee, Chi Ho A.

Title: ALLOCATING ABIS INTERFACE TRANSMISSION CHANNELS IN PACKET  
CELLULAR RADIO NETWORK

REQUEST FOR RECONSIDERATION

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated December 12, 2005, please reconsider the patentability of the pending claims based on the following remarks.

Although claims 6-8 and 14-16 were deemed to include allowable subject matter, claims 1-2, 5, 9, 10 and 13 were rejected under 35 U.S.C. 103 as being obvious over Reilly (U.S. 5,953,668) in view of Lehtimaki (WO 96/32823), claims 3 and 11 were rejected under 35 U.S.C. 103 based on Reilly, Lehtimaki and Hjelm et al. (U. S. 5,978,368; hereafter "Hjelm") and claims 4 and 12 were rejected under 35 U.S.C. 103 based on Reilly, Lehtimaki and Malmgren et al. (U.S. 6,334,057). Applicants traverse the rejections because the cited prior art references, analyzed individually or in combination, fail to disclose, teach or suggest all the features recited in the rejected claims. For example, the cited prior art fails to disclose, teach or suggest the claimed method or network part wherein a necessary number of transmission channels are dynamically allocated to packet data transfer using in-band signally, the amount of packet data varying according to the modulation and coding scheme used on a Um interface, as recited in independent claims 1 and 9 respectively and their dependent claims.

Reilly merely discloses a Base Transceiver System (BTS) that utilizes a Time Division Multiplex (TDM) bus (controlled by a bus controller 55) connecting a wideband multichannel receiver 43 to Digital Signal Processor (DSP) demodulators 44-1, 44-2, ..., 44-P

and a wideband multichannel transmitter 49 to DSP modulators 48-1, 48-2, ..., 48-P. A transceiver control processor 50 is also connected to the TDM bus. A channel management process thus maintains a mapping between the radio interface channels (Um) and Abis traffic channels, through the use of the TDM bus (see, Fig. 3 and column 5 line 21 - column 6 line 49).

Accordingly, Reilly merely discloses that an allocable mapping may be made between air interface channels (Um) and landline interface traffic channels (Abis) by the base station, which reduces the traffic between the BSC (Base Station Controller) and BTS. The phrase "allocable mapping," however, does not refer to the allocation of transmission channels; rather, that phrase merely refers to the fact that there is an allocable, or allocated, mapping of Um and Abis channels. However, Reilly fails to teach or suggest anything about the actual transmission channels. In fact, Reilly's configuration is very different from the present invention, wherein a necessary number of transmission channels for packet data transfer is dynamically allocated between the base station controller BSC and the base station BTS to provide a way of optimizing the use of actual transmission resources between the BSC and BTS on the Abis interface.

Lehtimaki fails to remedy the deficiencies of Reilly because Lehtimaki merely discloses a transcoder with the functionality to prevent tandem coding of speech. However, the passage referred to by the Office Action, i.e., column 5 lines 15-64, and Lehtimaki generally, merely discloses a conventional transcoder/rate adaptor unit (TRCU).

Specifically, Lehtimaki states that the transcoder unit TRCU is located at the mobile services switching center MSC, but it may also be a part of a base station controller BSC or a base station BTS, and that the TRCU placed remote from the base station BTS must receive information on the radio interface for efficient decoding. For such control and synchronization of the transcoder, a special kind of inband signaling is used on the 16 kbit/s channel between the base station and the transcoder unit. That channel is also used for speech and data transmissions. Lehtimaki goes on to state that such remote control of a transcoder unit is described in the GSM recommendations 08.60 and 08.61. In Lehtimaki, in-band signaling is used for transferring control and synchronization information of the transcoder, when transcoder is remote from the base station.

However, in Lehtimaki no dynamic allocation of transmission channels is taught or suggested. Nor does Lehtimaki disclose, teach or suggest that any dynamical allocation depending on the modulation and coding scheme used in a Um interface ( i.e., the air

interface). Rather, Lehtimaki merely discloses conventional remote control of conventional transcoder unit, as described in the GSM recommendation 08.60 and 08.61.

Thus, the Office Action has mischaracterized Lehtimaki because a conventional TRCU fails to dynamically allocate a necessary number of transmission channels to packet data transfer using in-band signaling, wherein the amount of packet data varies according to the modulation and coding scheme used on a Um interface. Accordingly, the combined teachings of Reilly and Lehtimaki fail to disclose, teach or suggest the claimed invention.

Hjelm fails to remedy the above-identified deficiencies of Reilly and Lehtimaki because Hjelm merely teaches a control node and a base station node, wherein the control node maintains a first list of idle radio channels which is consulted in order to obtain channels for a first type of telecommunications service and a second list of idle radio channels is maintained for a specialized telecommunications service, the idle radio channels of the second list being radio channels which are unallocated with respect to the specialized telecommunications service but yet activated (e.g., having an established transmission path and synchronization).

Similarly, Malmgren fails to remedy the deficiencies of Reilly, Lehtimaki and Hjelm because Malmgren merely teaches a technique for assigning (i.e., allocating) uplink and downlink radio channels in a TDD-TDMA based network by determining the level of susceptibility associated with each mobile unit during both the uplink and downlink period.

Thus, the cited prior art, analyzed individually or in combination, fails to disclose, teach or suggest the claimed dynamic allocation, using in-band signaling, of a necessary number of transmission channels to packet data transfer, the amount of packet data varying according to the modulation and coding scheme used on a Um interface.

NIEMELA ET AL. -- 09/866,577  
Client/Matter: 060258-0280324

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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